

FCC ID: 2BO3L-17Z90U

OVER6G Checklist

- For frequencies up to 8500 MHz provide spatial peak SAR evaluation based on IEC/IEEE 62209-1528:2020, along with applicable product-specific procedures among KDB Pubs. 648474, 616217, 941225. SAR test data shall account for device tune-up tolerance (that is referred to as "Reported SAR" in KDB 447498).

ANS: Yes, the reported SAR was scaled by the tune-up tolerance.
Please See as Test Report FCC-SAR WiFi-6XD Part 1 (page 42 of 49).

Liquid Temperature : 21.0℃										Depth of Liquid: > 15cm		
Test Mode: WIFI 6E												
Remark	Test Position: Body	Antenna Position	Separation Distance (mm)	Frequency	Conducted Power (dBm)	Maximum Tune-up (dBm)	Scale Factor	SAR 1g (W/kg)	Reported SAR	Limit (W/kg)	psAPD ^{Note 2} (W/m2)	
											1 cm ²	4 cm ²
802.11be-EHT160												
Antenna: AUX-ANT												
	Bottom	Fixed	0	6025	11.35	12.00	1.161	0.074	0.086	1.60	0.738	0.474
	Bottom	Fixed	0	6345	11.45	12.00	1.135	0.137	0.155	1.60	1.370	0.913
Note 1	Bottom	Fixed	0	6505	12.15	13.00	1.216	0.464	0.564	1.60	4.640	3.030
	Bottom	Fixed	0	6665	11.56	12.30	1.185	0.024	0.028	1.60	0.240	0.135
	Bottom	Fixed	0	6985	12.19	13.00	1.205	0.262	0.316	1.60	2.620	1.670
	Back	Fixed	5	6505	12.15	13.00	1.216	0.027	0.033	1.60	0.268	0.198
Antenna: Main-ANT												
	Bottom	Fixed	0	6025	11.37	12.00	1.156	0.204	0.236	1.60	2.040	1.300
	Bottom	Fixed	0	6345	11.44	12.00	1.137	0.276	0.314	1.60	2.760	1.770
	Bottom	Fixed	0	6505	11.72	12.30	1.142	0.279	0.319	1.60	2.790	1.720
	Bottom	Fixed	0	6665	11.52	12.30	1.196	0.290	0.347	1.60	2.900	1.810
	Bottom	Fixed	0	6985	11.14	12.00	1.218	0.105	0.128	1.60	1.050	0.752
Note 1	Back	Fixed	5	6505	11.72	12.30	1.142	0.041	0.047	1.60	0.406	0.328

Note: 1. We only presented the worst plots for each test configuration.

2. For reference purposes only, not specifically for compliance.

- This policy considers a device compliant for Equipment Authorization purposes, so long as the SAR evaluation of step 1. is within the same SAR limits that have been established for frequencies below 6000 MHz (e.g., 1.6 W/kg for 1-g average SAR). In this case, the SAR evaluations are taken as a conservative compliance demonstration to the MPE power density limits of 47 CFR 1.1310(d)(3).

ANS: SAR was performed to demonstrate < 1.6 W/kg and PD was performed to demonstrate compliance with 1.1310(d)(3).

3. Documentation is required to support evaluation with MPE limits providing power density data in accordance with the following:
- 3.1 For the test configurations of step 1 having the highest SAR, evaluate Incident Power Density (IPD), using a suitable near-field probe and a total-field/power-density reconstruction method.

ANS: Yes, E-field probe EUmmW4, 10GHz verification source and Dipole 6.5GHzV2 were used for PD measurement. Please See as Test Report FCC-SAR WiFi-6XD Part 1 (Page 13 of 49) & Test Report FCC-SAR WiFi-6XD Part 4 D6.5GHzV2 SN1051.

4. MEASUREMENT EQUIPMENTLIST

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Signal Generator	Agilent	N5182B	MY53050409	2024.11.29	1 Year
2.	Data Acquisition Electronic	SPEAG	DAE4	1337	2025.03.21	1 Year
3.	E-Field Probe	SPEAG	EX3DV4	3801	2025.07.03	1 Year
4.	E-Field Probe	SPEAG	EUmmWV4	9584	2025.06.20	1 Year
5.	System Verification Device	SPEAG	5G verification source 10 GHz	2014	2024.10.16	1 Year
6.	Stäubli Robot TX90 XL	Stäubli	TX90	F12/5K9SA1/A101	N.C.R.	N.C.R.
7.	mmWave Phantom	SPEAG	QD 015 025CA	1059	N.C.R.	N.C.R.
8.	D6.5GHzV2 system Validation Dipole	SPEAG	D6.5GHzV2	1051	2024.09.17	3 Years
9.	ENA Network Analyzer	Agilent	E5071C-285	MY46215502	2025.05.26	1 Year
10.	SAR Software	SPEAG	Dasy6 SAR	V16.0.0.016	N.C.R.	N.C.R.
11.	Test Software	Speag	cDasy6 Module mmWave	V16.0.2.136	N.C.R.	N.C.R.

- 3.2 Report estimated IPD measurement uncertainty (e.g., per methods of IEC/IEEE 63195-1:2022)

ANS: Yes, Please See as Test Report FCC-SAR WiFi-6XD Part 1 (Page 12 of 49)

3.9. Measurement Uncertainty

cDASY6 Module mmWave Uncertainty Budget						
Evaluation Distances to the Antennas > $\lambda/2\pi$						
In Compliance with IEC/IEEE 63195						
Error Description	Unc. Value ($\pm$ dB)	Probab. Distri.	Div.	(α_i)	Std. Unc. ($\pm$ dB)	(ν_i) ν_{eff}
Uncertainty terms dependent on the measurement system						
CAL Calibration	0.49	N	1	1	0.49	∞
COR Probe correction	0	R	$\sqrt{3}$	1	0	∞
FRS Frequency response (BW $\leq$ 1 GHz)	0.20	R	$\sqrt{3}$	1	0.12	∞
SCC Sensor cross coupling	0	R	$\sqrt{3}$	1	0	∞
ISO Isotropy	0.50	R	$\sqrt{3}$	1	0.29	∞
LIN Linearity	0.20	R	$\sqrt{3}$	1	0.12	∞
PSC Probe scattering	0	R	$\sqrt{3}$	1	0	∞
PPO Probe positioning offset	0.30	R	$\sqrt{3}$	1	0.17	∞
PPR Probe positioning repeatability	0.04	R	$\sqrt{3}$	1	0.02	∞
SMO Sensor mechanical offset	0	R	$\sqrt{3}$	1	0	∞
PSR Probe spatial resolution	0	R	$\sqrt{3}$	1	0	∞
FLD Field impedance dependance	0	R	$\sqrt{3}$	1	0	∞
APD Amplitude and phase drift	0	R	$\sqrt{3}$	1	0	∞
APN Amplitude and phase noise	0.04	R	$\sqrt{3}$	1	0.02	∞
TR Measurement area truncation	0	R	$\sqrt{3}$	1	0	∞
DAQ Data acquisition	0.03	N	1	1	0.03	∞
SMP Sampling	0	R	$\sqrt{3}$	1	0	∞
REC Field reconstruction	0.60	R	$\sqrt{3}$	1	0.35	∞
TRA Forward transformation	0	R	$\sqrt{3}$	1	0	∞
SCA Power density scaling	-	R	$\sqrt{3}$	1	-	∞
SAV Spatial averaging	0.10	R	$\sqrt{3}$	1	0.06	∞
SDL System detection limit	0.04	R	$\sqrt{3}$	1	0.02	∞
Uncertainty terms dependent on the DUT and environmental factors						
PC Probe coupling with DUT	0	R	$\sqrt{3}$	1	0	∞
MOD Modulation response	0.40	R	$\sqrt{3}$	1	0.23	∞
IT Integration time	0	R	$\sqrt{3}$	1	0	∞
RT Response time	0	R	$\sqrt{3}$	1	0	∞
DH Device holder influence	0.10	R	$\sqrt{3}$	1	0.06	∞
DA DUT alignment	0	R	$\sqrt{3}$	1	0	∞
AC RF ambient conditions	0.04	R	$\sqrt{3}$	1	0.02	∞
AR Ambient reflections	0.04	R	$\sqrt{3}$	1	0.02	∞
MSI Immunity / secondary reception	0	R	$\sqrt{3}$	1	0	∞
DRI Drift of the DUT	-	R	$\sqrt{3}$	1	-	∞
Combined Standard Uncertainty					0.76	∞
Expanded Standard Uncertainty (95%)					1.52	

3.3 Power density test data shall account for device tune-up tolerance.

ANS: Yes, Please See as Test Report FCC-SAR WiFi-6XD Part 1 (Page 43 of 49)

10.2. Power Density Test Result

Test Date	2025. 09. 26	Temp./Hum.	21°C/53%
Test Voltage	AC 120V, 60Hz (with AC Adapter)	Tested by	Brian Hsieh

Test Mode: WIFI 6E									
Remark	Test Position: Body	Antenna Position	Separation Distance (mm)	Frequency	Uncertainty Cor. Factor Note2	Scale Factor	psPDtot (W/m ²) 4cm ²	C-psPDtot+ (W/m ²) 4cm ² Note3	Limit (W/m ²) 4cm ²
802.11be-EHT160									
Antenna: AUX-ANT									
	Bottom	Fixed	2	6025	1.12	1.161	1.560	2.028	10.00
	Bottom	Fixed	2	6345	1.12	1.135	1.940	2.466	10.00
	Bottom	Fixed	2	6505	1.12	1.216	1.950	2.656	10.00
	Bottom	Fixed	2	6665	1.12	1.185	2.390	3.172	10.00
Note 1	Bottom	Fixed	2	6985	1.12	1.205	3.080	4.157	10.00
Antenna: Main-ANT									
	Bottom	Fixed	2	6025	1.12	1.156	1.000	1.295	10.00
	Bottom	Fixed	2	6345	1.12	1.137	0.797	1.015	10.00
Note 1	Bottom	Fixed	2	6505	1.12	1.142	2.290	2.929	10.00
	Bottom	Fixed	2	6665	1.12	1.196	0.663	0.888	10.00
	Bottom	Fixed	2	6985	1.12	1.218	1.750	2.387	10.00

Note: 1. We only presented the worst plots for each test configuration.

Note 2: The correction factor uncertainty in dB corresponds to the difference between the actual uncertainty and the 30% target value, as per the TCB Workshop April. 2021.

Per IEC 62479:2010, actual uncertainty is 1.52 dB(42%) so the correction factor is $0.7 + 0.42 = 1.12$.

Note 3: c-psPDtot = Compensated PStot.

3.4 If supported by the test system, also report estimated Absorbed (epithelial) Power Density (APD) (e.g., as per method in [Samaras, 2021])

ANS: Yes, Please See as Test Report FCC-SAR WiFi-6XD Part 1 (page 42 of 49).

Liquid Temperature : 21.0°C										Depth of Liquid: > 15cm		
Test Mode: WIFI 6E												
Remark	Test Position: Body	Antenna Position	Separation Distance (mm)	Frequency	Conducted Power (dBm)	Maximum Tune-up (dBm)	Scale Factor	SAR 1g (W/kg)	Reported SAR	Limit (W/kg)	psAPD ^{Note 2} (W/m2)	
											1 cm ²	4 cm ²
802.11be-EHT160												
Antenna: AUX-ANT												
	Bottom	Fixed	0	6025	11.35	12.00	1.161	0.074	0.086	1.60	0.738	0.474
	Bottom	Fixed	0	6345	11.45	12.00	1.135	0.137	0.155	1.60	1.370	0.913
Note 1	Bottom	Fixed	0	6505	12.15	13.00	1.216	0.464	0.564	1.60	4.640	3.030
	Bottom	Fixed	0	6665	11.56	12.30	1.185	0.024	0.028	1.60	0.240	0.135
	Bottom	Fixed	0	6985	12.19	13.00	1.205	0.262	0.316	1.60	2.620	1.670
	Back	Fixed	5	6505	12.15	13.00	1.216	0.027	0.033	1.60	0.268	0.198
Antenna: Main-ANT												
	Bottom	Fixed	0	6025	11.37	12.00	1.156	0.204	0.236	1.60	2.040	1.300
	Bottom	Fixed	0	6345	11.44	12.00	1.137	0.276	0.314	1.60	2.760	1.770
	Bottom	Fixed	0	6505	11.72	12.30	1.142	0.279	0.319	1.60	2.790	1.720
	Bottom	Fixed	0	6665	11.52	12.30	1.196	0.290	0.347	1.60	2.900	1.810
	Bottom	Fixed	0	6985	11.14	12.00	1.218	0.105	0.128	1.60	1.050	0.752
Note 1	Back	Fixed	5	6505	11.72	12.30	1.142	0.041	0.047	1.60	0.406	0.328

Note: 1. We only presented the worst plots for each test configuration.

2. For reference purposes only, not specifically for compliance.

4. The process of steps 1 to 4 shall be repeated for at least five channels, at the channel center frequency, selected to cover uniformly the largest frequency ranges used in the device, between 5925 MHz and 8500 MHz, and consistent with KDB Publication 248227 test configuration provisions.

ANS: 5 channels were performed with SAR measurement for 6 GHz WLAN.
Please See as Test Report FCC-SAR WiFi-6XD Part 1 (page 42 of 49).

Liquid Temperature : 21.0℃											Depth of Liquid: > 15cm	
Test Mode: WIFI 6E												
Remark	Test Position: Body	Antenna Position	Separation Distance (mm)	Frequency	Conducted Power (dBm)	Maximum Tune-up (dBm)	Scale Factor	SAR 1g (W/kg)	Reported SAR	Limit (W/kg)	psAPD ^{Note 2} (W/m2)	
											1 cm ²	4 cm ²
802.11be-EHT160												
Antenna: AUX-ANT												
	Bottom	Fixed	0	6025	11.35	12.00	1.161	0.074	0.086	1.60	0.738	0.474
	Bottom	Fixed	0	6345	11.45	12.00	1.135	0.137	0.155	1.60	1.370	0.913
Note 1	Bottom	Fixed	0	6505	12.15	13.00	1.216	0.464	0.564	1.60	4.640	3.030
	Bottom	Fixed	0	6665	11.56	12.30	1.185	0.024	0.028	1.60	0.240	0.135
	Bottom	Fixed	0	6985	12.19	13.00	1.205	0.262	0.316	1.60	2.620	1.670
	Back	Fixed	5	6505	12.15	13.00	1.216	0.027	0.033	1.60	0.268	0.198
Antenna: Main-ANT												
	Bottom	Fixed	0	6025	11.37	12.00	1.156	0.204	0.236	1.60	2.040	1.300
	Bottom	Fixed	0	6345	11.44	12.00	1.137	0.276	0.314	1.60	2.760	1.770
	Bottom	Fixed	0	6505	11.72	12.30	1.142	0.279	0.319	1.60	2.790	1.720
	Bottom	Fixed	0	6665	11.52	12.30	1.196	0.290	0.347	1.60	2.900	1.810
	Bottom	Fixed	0	6985	11.14	12.00	1.218	0.105	0.128	1.60	1.050	0.752
Note 1	Back	Fixed	5	6505	11.72	12.30	1.142	0.041	0.047	1.60	0.406	0.328

Note: 1. We only presented the worst plots for each test configuration.
2. For reference purposes only, not specifically for compliance.

5. For the purpose of SAR test exemption, analyses of simultaneous transmission combinations of RF sources with frequencies from 4 MHz and 8500 MHz (where the lowest frequency is per KDB Publication 447498- D01 SAR evaluation requirements¹¹), may be performed according to the SPLSR approach (id.). Accordingly, no further compliance evaluation is needed for all antenna pairs for which the SPLSR exemption is applicable.

ANS: The simulation SAR is < 1.6 W/kg and SPLSR was not performed for this application.

6. For evaluations and test exemption analyses of simultaneous-transmission combinations of different RF sources, the procedure outlined above, for a single source between 6000 and 8500 MHz shall be included in the calculation of total exposure ratio (TER) as in KDB Pub. 447498-D01-Appendix C.

ANS: TER was demonstrated < 1 and presented at section 10.2 of Test Report FCC-SAR WiFi-6XD Part 1.

Total Exposure Ratio

WLAN 6E ANT AUX C-psPD _{tot} avg	WLAN 6E ANT Main C-psPD _{tot} avg	BT ANT AUX ^{Note} SAR _{1g}	TER	Limit
4.246 / 10 = 0.425	4.692 / 10 = 0.469	0.060 / 1.6 = 0.038	0.931	≤1

Note: The BT Highest Body SAR_{1g} is 0.060 W/kg, please refer to report number EM-SR250131.

7. Any source above 8500 MHz shall be evaluated via incident power density measurements.

ANS: This application supports frequency up to 7115MHz only.